



Lead

What is lead?

Lead is a heavy, soft, flexible, blue-gray metal. It generally occurs in nature in the form of ores, and was recovered in early times as a by-product of smelting silver. Once lead is mined, processed and introduced into our environment, it can be a potential problem forever. Nearly all the lead in the environment is due to people's activities.

The chemical symbol for lead is Pb. The symbol comes from the Latin word for lead—plumbum. The word plumber also comes from plumbum, because plumbers used large amounts of lead.

People used lead even before history was recorded. Egyptians used lead in solder, cosmetics, and building materials. Greeks and Romans used lead in plumbing. The first methods of transporting water into Rome were through aqueducts made from lead that carried water into the city from seven miles away. The Romans used lead to line food containers. They added lead to wine to sweeten it and to prevent spoiling.

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soft, flexible,
blue-gray metal.**



Lead has been used for thousands of years.

Why was lead used?

Lead was put in products for many reasons:

- **Prevents corrosion.** Lead will not crack easily with wear, weather, or temperature change.
- **Kills mold and mildew.** Lead is used in areas with high moisture.
- **Easy to shape.** Lead is a soft metal and melts at a low temperature (620° F).
- **Is strong.** Lead has a lot of mechanical strength.
- **Blocks radiation.** Lead is used in products designed to block radiation, such as the lead aprons used when X-rays are taken.
- **Blocks sound.** Lead was sometimes used for sound-proofing.
- **Helps paint dry.** Lead was added to paint to quicken the drying process.
- **As a pigment.** Different compounds of lead were used to add color, to whiten, or to brighten paint.



LEAD = POISON!

Lead is dangerous

Lead is a dangerous poison. You cannot see or feel the lead that can make you sick. Lead is most dangerous when it is in the form of dust or fumes.

Lead dust particles can be **very small**—so small that they may not be visible. They are easy to breathe if they are in the air and are easy to swallow if they are on anything you put in your mouth—such as food, cigarettes, or fingers. Lead dust tends to settle on flat surfaces. When you touch those surfaces, you get lead on your hands. If you put your hands to your mouth, you will swallow lead dust. Because young children frequently put their hands in their mouths, they are at a high risk for lead poisoning.

Lead is poisonous when you breathe or swallow it.



**Lead poisoning
was recognized
2,000 years ago.**

Lead causes health problems

The health problems associated with lead have been known for a very long time. Ancient Egyptians knew that lead could kill people if they swallowed too much of it. In the Middle Ages, doctors realized that some of the health problems of painters, miners, and artists were caused by exposure to lead on the job. In 1786, Ben Franklin wrote to a friend about work-related lead poisoning cases.

In the early 1900s, doctors found that lead-based paint caused reproductive problems for workers and their families. Doctors from all over the world began to study lead-based paint as a cause of childhood diseases. Many doctors in the United States studied and wrote articles about childhood lead poisoning. In 1913, Dr. Alice Hamilton—an American occupational health doctor—wrote about painters and the hazards of their work. She documented their exposure to lead and their health problems.